



TECHNICAL INFORMATION



/ TABLE OF CONTENT

Technical Information

1. Hardware and software requirements
2. Firewalls and Antivirus
3. Resettle the application

/ HARDWARE AND SOFTWARE REQUIREMENTS

Operating Systems Supported

- Windows 7 SP1+ or newer
- Mac OS X 10.11 or newer

Minimum PC Requirements	Minimum Mac Requirements	Recommended PC Requirements	Recommended Mac Requirements
CPU: 1.8GHz Intel Core i5 or 2GHz AMD Phenom II	CPU: 2GHz Intel Core i5	CPU 2.5GHz Intel Core i7 or 2.2GHz AMD A8	CPU: 2.5GHz Intel Core i7
Memory: 4GB	Memory: 4GB	Memory: 8GB	Memory: 8GB
Graphics: Graphics device with DX10 (shader model 4.0)	Graphics: Graphics device with DX10 (shader model 4.0)	Graphics: Dedicated graphics device with DX11 (shader model 4.0) and at least 1GB of on-board memory	Graphics: Dedicated graphics device with DX11 (shader model 4.0) and at least 1GB of on-board memory
Storage: 2.5GB	Storage: 2.5GB	Storage: 2.5GB	Storage: 2.5GB

Note

Minimum requirements describe the lowest level of capability necessary for the virtual worlds to successfully perform. If your computer does not meet these requirements, we can make no guarantee that your computer will be able to run the different virtual worlds. In order to ensure the best experience, we highly recommend to use a computer meeting or exceeding the "recommended requirements".

/ FIREWALLS AND ANTIVIRUS

As a social business platform, **unimpeded connection to the internet** is vital to a positive user experience. **Firewalls**, although necessary to protect networks from malicious attacks, **may also interfere with the application's ability to communicate with other users.**

i To facilitate download and installation of the applications for your employees, we highly recommend working with your IT team to :

- a. Open up ports 80 & 5060 in UDP**
- b. Add the application to your antivirus whitelist**

a These ports are often filtered or may be blocked entirely and thus might prevent **Laval Virtual Congress Center's** voice protocols from functioning. In the next slide, you will find a list of Ports and IP Addresses you may need to enable on your firewall.

b

```
C:\Program Files (x86)\Laval Virtual Congress Center\Laval Virtual Congress Center.exe  
C:\Users\"Username"\AppData\Laval Virtual Congress Center\Laval Virtual Congress Center.exe  
C:\Users\"Username"\AppData\Local\Laval Virtual Congress Center\UnityCrashHandler32.exe  
C:\Users\"Username"\AppData\Local\Laval Virtual Congress Center\Laval Virtual Congress Center_Data\Plugins\ZFGameBrowser.exe
```

/ FIREWALLS AND ANTIVIRUS (REQUIREMENTS TO CONNECT TO A VIRTUAL WORLD)

Below is a list of Ports and IP Addresses you may need to enable on your firewall depending on the rules you have implemented for the application to work properly. **The IP addresses are not fixed and may change.**

Host	IP	Port	Services
vw1.virbela.io	54.191.212.254	TCP 443, TCP 8443	World Server
talk1.virbela.com	15.188.119.211.80	UDP 80	Voice Server
	54.187.240.47	UDP 80	Auditorium Voice Server
	34.214.22.182	UDP 80	Teamsuite Voice Server 1
	52.33.225.126	UDP 80	Teamsuite Voice Server 2
builds.virbela.com	172.67.33.158,	TCP 443	Patch
api.virbela.com		TCP 443	Database
assets.virbela.com	104.20.125.63,	TCP 443	
gamegui.virbela.com		TCP 443	Log in Page
game.virbela.com		TCP 443	Campus Flags
uploads.virbela.com	104.20.124.63	TCP 443	WebBoard Uploads

FIREWALLS AND ANTIVIRUS (REQUIREMENTS FOR SCREEN SHARING AND WEBCAM)

Below is a list of Ports and IP Addresses you may need to enable on your firewall depending on the rules you have implemented for the application to work properly. **The IP addresses are not fixed and may change.**

Host	IP	Port
agora.io	52.53.64.174	TCP 1080; 8000 UDP 1080; 4000 to 4030; 8000; 9700; 25000
qoslbs.agoralab.co	107.155.14.132, 184.72.16.87, 209.177.94.19, 35.169.70.181, 69.172.244.42	
qos.agoralab.co	107.155.5.220, 128.1.75.151	
ap.agoraio.cn	35.169.70.181, 3.0.213.60, 164.52.122.53, 184.72.16.87, 52.68.71.190, 148.153.116.174	
vocs1.agora.io	209.177.94.19, 184.72.16.87, 107.155.14.132, 35.169.70.181, 69.172.244.42	
vocs2.agora.io	209.177.94.19, 69.172.244.42, 107.155.14.132, 35.169.70.181, 184.72.16.87	
vocs3.agora.io	209.177.94.19, 107.155.14.132, 184.72.16.87, 35.169.70.181, 69.172.244.42	
vocs4.agora.io	209.177.94.19, 107.155.14.132, 184.72.16.87, 35.169.70.181, 69.172.244.42	
vocs5.agora.io	35.169.70.181, 184.72.16.87, 69.172.244.42, 107.155.14.132, 209.177.94.19	

/ FIREWALLS AND ANTIVIRUS

- The game server is a system built with SmartFox which runs on AWS and uses TCP/IP port 443.
- World and voice servers have specific IP addresses assigned by AWS and can change over time.
- Patches come from build.virbela.com on TCP port 443.
- The screen share is built on Agora ; you will find complementary information on their Developer Center website:

<https://docs.agora.io/en/Agora%20Platform/firewall?platform=%20%20All%20Platforms#native-sdk%60>



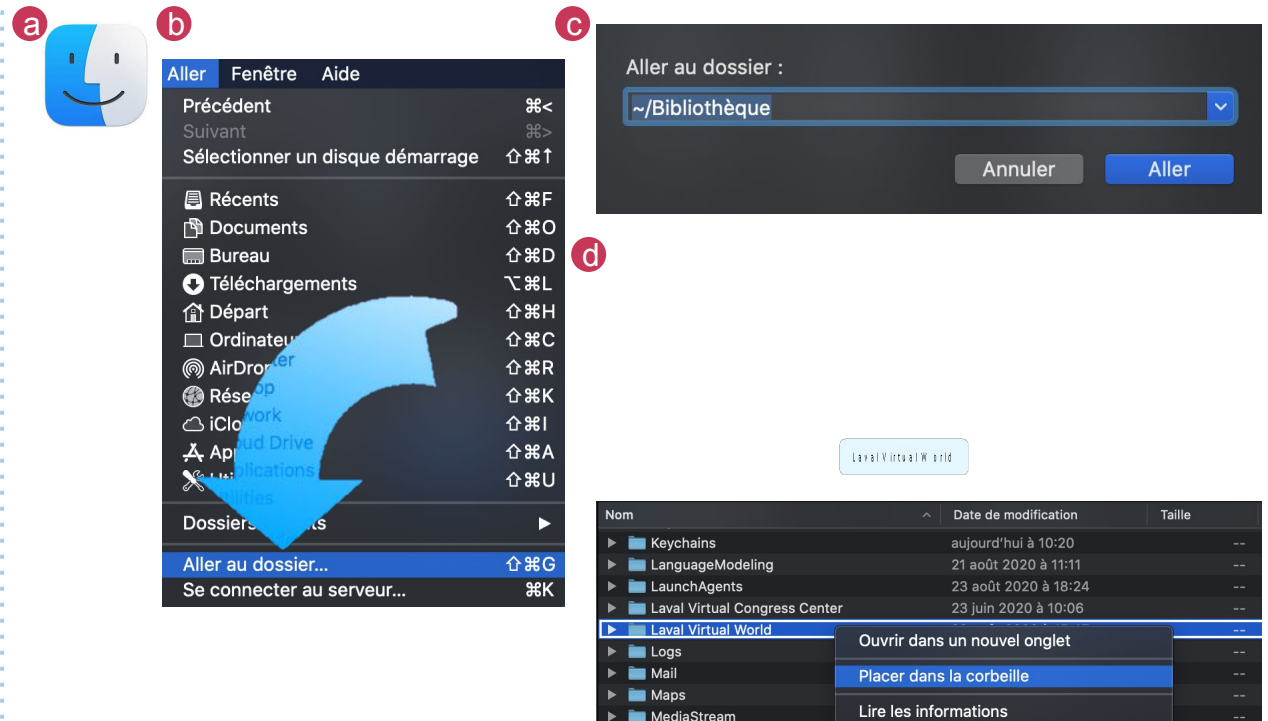
RE-INSTALL THE APPLICATION ON MAC

To perform a new application installation, you have to delete properly the first one :

i *If your applications version appears corrupted, or an error message repeatedly appears, you should remove all files and caches related to it.*

- Open the Finder application
- Open the "Go" dropdown menu and select "Go to folder"
- Type in ~/Library and press "Go"
- Search through the folders and delete any folder that is related to a virtual world
- Re-download the app:

<https://www.virbela.com/install?id=lavalcongress>



/ RE-INSTALL THE APPLICATION ON WINDOWS

To perform a new application installation, you have to delete properly the first one :

i *If your applications version appears corrupted, or an error message repeatedly appears, you should remove all files and caches related to it.*

- a. Redownload the app:
<https://www.virbela.com/install?id=lavalcongress>
- b. Once the installation file is launched, check the box "delete all existing downloads and caches" .



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3D WORLD
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